UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/704,936	11/02/2000	Lee A Neitzel	06005/35528	4816

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EXAMINER
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ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.		Applicant(s)
	09/704,936		NEITZEL ET AL.
	Examiner		Art Unit
	Andrew C. Lee		2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 September 2006_.

2a)☐ This action is FINAL.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1, 3 – 6, 8 – 18, 21 – 32, 34 – 41, 43 – 50, 52 – 56_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1, 3 – 6, 8 – 18, 21 – 32, 34 – 41, 43 – 50, 52 – 56_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 17, 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, line 7, the term "that worker object" is ambiguous and as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 17, line 8 and line 9, line 10, respectively, the term "that worker object" is ambiguous and as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 29, line 12, the term "that worker object" is ambiguous and as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Response to Amendment

2.   After close review of the references, the allowability of claims 4, 7, 11, 16, 21, 27, 33, 35, 42, 44, 48, 51, 53, 56 is withdrawn.

Claim Rejections - 35 USC § 102

3.　The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.　Claims 1, 3 – 6, 8 – 18, 21 – 32, 34 – 41, 43 – 50, 52 – 56 are rejected under 35

U.S.C. 102(e) as being anticipated by Liebowitz et al. (US 5812545).

Regarding claims 1, 44, Liebowitz et al. disclose the limitation of a method of

transmitting data through a communication link having a bandwidth using a plurality of

communication connections (recited "FAD also create multiple incoming data queues"

as having a bandwidth using a plurality of communication connections; Fig. 7B, Fig. 2,

column 5, lines 58 – 64); the method comprising the steps of: establishing a worker

object for each one of the communication connections (recited "support different formats

and a multiplicity of communication ports, and FAD can break each frame into smaller

data segments and stores as many fragments as possible in a burst buffer" as

establishing a worker object for each one of the communication connections; Fig. 4,

column 4, lines 37 – 39, lines 51 – 54); distributing the data amongst the worker objects

(recited "creates an outgoing data queue corresponding to each user access device for

storing data received therefrom" as distributing the data amongst the worker objects;

column 4, lines 44 – 46); forming messages using the distributed data within each

worker object and a parameter of that worker object (recited "collection of fragments is

called the payload" as forming messages using the distributed data within each worker

object, and recited "payload header which identifies the location of each fragment" as a

parameter of that worker object; column 4, lines 52 – 67); and delivering the messages

to an underlying layer of the plurality of communication connections so that each

communication connection uses no more than a predetermined portion of the bandwidth

(recited "fragment identifier relating a fragment to the frame from which it was derived

and the burst buffer also stores bandwidth requests for transmissions" as delivering the

messages to an underlying layer of the plurality of communication connections so that

each communication connection uses no more than a predetermined portion of the

bandwidth; Fig. 7B and Fig. 4, column 4, lines 53 – 67). Liebowitz et al. also disclose

the limitation of allocating a predetermined portion of the bandwidth to each of the

plurality of communication connections (recited "burst buffer also stores bandwidth

request for transmission" as allocating a predetermined portion of the bandwidth; Fig.

7B, column 4, lines 63 – 64; recited "the port CIR and terminal CIR " as allocating the

predetermined portion of the bandwidth to each of the plurality of communication

connections; column 16, lines 47 – 53) and setting a message size parameter (recited

"the size of the burst buffer is set by the network-wide parameter"; column 4, lines 66 –

68; recited "formats queue size information, as well as stream request information" as

setting a message size parameter; column 6, lines 27 – 33) and a time between calls

parameters for each of the plurality of communication connections (recited "sends a

timing indicator to TMC indicating the precise time that it can transmit a burst" as a time

between calls parameters; column 5, lines 52 – 62).

Regarding Claim 3, Liebowitz et al. disclose the limitation of the method of claimed wherein the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections (recited "burst buffer also stores bandwidth request for transmission" as allocating a predetermined portion of the bandwidth; Fig. 7B, column 4, lines 63 – 64; recited "the port CIR and terminal CIR " as allocating the predetermined portion of the bandwidth to each of the plurality of communication connections; column 16, lines 47 – 53) including the step of allocating different predetermined portions of the bandwidth to two of the plurality of communication connections (recited "a stream request is a request for a guaranteed amount of bandwidth, stream requests are usually made on behalf of voice and video calls" as allocating different predetermined portions of the bandwidth to two of the plurality of communication connections; column 5, lines 58 – 62).

Regarding Claim 4, Liebowitz et al. disclose the limitation of the method of claimed wherein the step of allocating the predetermined portion of the bandwidth to each of the plurality of communication connections including the step of setting a time between calls parameter for each of the plurality of communication connections (recited "the port CIR and terminal CIR " as allocating the predetermined portion of the bandwidth to each of the plurality of communication connections; column 16, lines 47 – 53; recited "sends a timing indicator to TMC indicating the precise time that it can transmit a burst" as a time between calls parameters; column 5, lines 52 – 62).

Regarding claims 5, 36, Liebowitzet al. disclose the limitation of the method, system of claimed wherein the step of allocating the predetermined portion of the

bandwidth to each of the plurality of communication connections including the step of

setting a message size parameter for each of the plurality of communication

connections (recited "the port CIR and terminal CIR " as allocating the predetermined

portion of the bandwidth to each of the plurality of communication connections; column

16, lines 47 – 53; recited element "frame.length" as controls the size of the messages;

column 14, table I; recited "the size of the burst buffer is set by the network-wide

parameter"; column 4, lines 66 – 68; recited "formats queue size information, as well as

stream request information" as setting a message size parameter; column 6, lines 27 –

33).

Regarding claims 6, 28, 37, 45, 54, Liebowitzet al. disclose the limitation of the

method, system of claimed wherein the step of allocating the predetermined portion on

the bandwidth to each of the plurality of communication connections including the step

of setting, a sending buffer size for each of the plurality of communication connections

(recited "the port CIR and terminal CIR " as allocating the predetermined portion of the

bandwidth to each of the plurality of communication connections; column 16, lines 47 –

53; recited "size of the burst buffer" as sending buffer size for each of the plurality of

communication connections; column 4, lines 63 – 67).

Regarding claims 8, 18, Liebowitz et al. disclose the limitation of the method of

claimed wherein the step of establishing the worker object for each one of the plurality

of communication connections including the step of using the worker object to

instantiate one of the plurality of communication connections (recited "stores real time

data from the outgoing data queues associated with ports configured to receive real

time data in FIFO" as establishing the worker object for each one of the plurality of

communication connections including the step of using the worker object to instantiate

one of the plurality of communication connections; column 5, lines 18 – 20).

Regarding claim 9, Liebowitz et al. disclose the limitation of the method of

claimed further comprising the step of partitioning the data to form a plurality of

partitioned data streams prior to distributing the data amongst the worker (recited "break

each frame into smaller segments called fragments and stores as many fragments as

possible in a burst buffer" as partitioning the data to form a plurality of partitioned data

streams prior to distributing the data amongst the worker; column 4, lines 51 – 56).

Regarding claims 10, 31, 46, 47, 50, Liebowitz et al. disclose the limitation of the

method, system of claimed wherein the step of partitioning the data to form a plurality of

partitioned data streams prior to distributing the data amongst the worker objects

including the step of partitioning the data based on a type of data (recited "real time data

and non real time data" as partitioning the data based on a type of data; column 5, lines

7 – 22).

Regarding claims 11, 21, 48, Liebowitz et al. disclose the limitation of claimed

wherein the step of partitioning the data to form the plurality of partitioned data streams

includes the step of establishing a one-to-one corresponding between the plurality of

partitioned data streams and the worker objects (column 5, lines 18 – 28).

Regarding claims 12, 22, Liebowitz et al. disclose the limitation of the method of

claimed wherein the step of distributing the data amongst the worker objects including

the step of transferring a subset of the data to one of the worker objects in response to

a request for data from the one worker object (recited "all data streams share the burst

buffer regardless of whether they contain voice, video or data" as transferring a subset

of the data to one of the worker objects in response to a request for data from the one

worker object; column 16, lines 16 – 21).

Regarding claims 13, 23, 30, Liebowitz et al. disclose the limitation of the method

of claimed wherein the step of distributing the data amongst the worker objects

including the step of using a data transmission object (recited "Fragment Assembler/

Disassembler (FAD)" as a data transmission object; column 4, lines 42 – 50).

Regarding claims 14, 24, 25, 43, 52, Liebowitz et al. disclose the method, system

of claimed wherein the step of forming the messages using the distributed data within

each worker object including the step of forming the messages within each worker

object using a parameter of that worker object that controls the size of the messages

(recited element "frame.length" as a parameter of that worker object that controls the

size of the messages; column 14, table I).

Regarding claims 15, 26, 34, Liebowitz et al. disclose the limitation of the

method, system of claimed wherein the step of delivering the messages formed within

one of the worker objects including the step of delivering the messages formed within

the one worker object to the underlying layer based on a parameter of the one worker

object that affects the rate at which the messages are delivered to the underlying layer

(recited "FAD examines each frame in accordance with the high level application

protocol corresponding to the source of that frame " as delivering the messages formed

within the one worker object to the underlying layer based on a parameter of the one

worker object that affects the rate; column 6, lines 16 – 31).

Regarding claim 16, 27, 35, 56, Liebowitz et al. disclose the limitation wherein

the step of delivering the messages formed within the one worker object to the

underlying layer based on the parameter of one worker object that affects the rate at

which the messages are delivered to the underlying layer includes the step of using a

time between calls parameters (recited "FAD examines each frame in accordance with

the high level application protocol corresponding to the source of that frame " as

delivering the messages formed within the one worker object to the underlying layer

based on a parameter of the one worker object that affects the rate; column 6, lines 16

– 31; recited "sends a timing indicator to TMC indicating the precise time that it can

transmit a burst" as a time between calls parameters; column 5, lines 52 – 62).

Regarding claims 17, 29, Liebowitz et al. disclose the limitation of a system of

transmitting data through a communication link having a bandwidth using a plurality of

communication connections (recited "FAD also create multiple incoming data queues"

as having a bandwidth using a plurality of communication connections; Fig. 7B, Fig. 2,

column 5, lines 58 – 64), the system comprising: a communication object that distributes

the data amongst the plurality of communication connections (Fig. 4, element 66 FAD

as a communication object; column 4, lines 39 – 56); a plurality of worker objects

(recited "support different formats and a multiplicity of communication ports" as a

plurality of worker objects; column 4, lines 37 – 39), wherein each worker object is

associated with one of the communication connections and form messages using the

data distributed to the communication connection associated with that worker object and

a parameter of that work object (recited "collection of fragments is called the payload"

as forming messages using the distributed data within each worker object, and recited

"payload header which identifies the location of each fragment" as a parameter of that

worker object; column 4, lines 52 – 67), and wherein each worker object delivers the

messages formed within that worker object to an underlying layer of the plurality of

communication connections so that each communication connection uses no more than

a predetermined portion of bandwidth allocated to that communication connection

(recited "fragment identifier relating a fragment to the frame from which it was derived

and the burst buffer also stores bandwidth requests for transmissions" as delivering the

messages to an underlying layer of the plurality of communication connections so that

each communication connection uses no more than a predetermined portion of the

bandwidth; Fig. 7B and Fig. 4, column 4, lines 53 – 67); wherein the communication

object partitions the data to form a plurality of partitioned data streams prior to

distributed the data amongst the plurality of communication connections (recited "real

time data and non real time data" as partitioning the data based on a type of data;

column 5, lines 7 – 22); and wherein the communication object establishes a one-to-one

correspondence between the plurality of partitioned data streams and the plurality of

worker objects (column 5, lines 18 – 28).

Regarding claim 32, Liebowitz et al. disclose the limitation of the system of

claimed wherein each of the plurality of worker processes is based on a worker object

(recited "created several burst buffers depending on the amount of data received from

the user access devices via Frame Handler module" as the plurality of worker

processes is based on a worker object; column 4, lines 54 – 56).

Regarding Claima 38, 49, Liebowitz et al. disclose the limitation of a system for

transmitting data through a communication link comprising: a communication station

having a processor and a memory communicatively coupled to the processor (recited "a

processor having a digital memory device" as having a processor and a memory

communicatively coupled to the processor column 21, lines 33 – 39), wherein the

processor is programmed to provide a plurality of work objects that each (recited "said

processor being operable to generate bursts using data received" as programmed to

provide a plurality of work objects), forms messages using one of a plurality of

partitioned data streams and a parameter of the worker objects (recited "collection of

fragments is called the payload" as forming messages using the distributed data within

each worker object, and recited "payload header which identifies the location of each

fragment" as a parameter of that worker object; column 4, lines 52 – 67), instantiates a

separate communication connection through the communication link and wherein each

of the plurality of worker objects includes a set of communication connection

parameters that are uniquely configurable to determine the manner in which the data is

sent to an underlying layer of the communication link (column 5, lines 18 – 28; and

recited "said processor being operable to generate bursts using data received" as

programmed to provide a plurality of work objects that each instantiates a separate

communication connection through the communication link; column 21, lines 33 – 39;

51 – 65); and wherein the set of communication connection parameters include a time

between calls parameter (recited "sends a timing indicator to TMC indicating the precise time that it can transmit a burst" as a time between calls parameters; column 5, lines 52 – 62; column 14, Table I).

Regarding Claim 39, Liebowitz et al. disclose the limitation of the system of claimed wherein the communication station is a sending communication gateway (Fig 5, elements 1, 2, 3 as sending communication gateway; Fig. 4, column 6, lines 46 – 55).

Regarding Claim 40, Liebowitz et al. disclose the limitation of the system of claimed wherein the communication station is a receiving communication gateway (recited element "terminal" as a receiving communication gateway; Fig. 2, column 3, lines 58 – 67).

Regarding Claim 41, Liebowitz et al. disclose the limitation of the system of claimed wherein each of the separate communication connection using a connection-oriented communication protocol (recited "to assign a fixed and guaranteed bandwidth to a PVC" as using a connection-oriented communication protocol; Fig. 8, column 16, lines 33 – 42, also "TCP/IP" as separate communication connection using a connection-oriented communication protocol, column 2, lines 22 – 24).

Regarding claim 53, Liebowitz et al. disclose the limitation of claimed wherein the step of uniquely configuring the set of communication parameters (column 14, Table I) uniquely associated with each of the worker processes includes the steps of configuring a message size parameter for each of the worker processes (recited "the port CIR and terminal CIR " as allocating the predetermined portion of the bandwidth to each of the plurality of communication connections; column 16, lines 47 – 53; recited element

"frame.length" as controls the size of the messages; column 14, table I; recited "the size

of the burst buffer is set by the network-wide parameter"; column 4, lines 66 – 68;

recited "formats queue size information, as well as stream request information" as

setting a message size parameter; column 6, lines 27 – 33) and configuring a time

between calls parameters for each of the worker processes (recited "sends a timing

indicator to TMC indicating the precise time that it can transmit a burst" as a time

between calls parameters; column 5, lines 52 – 62).

Regarding Claim 55, Liebowitz et al. disclose the limitation of the method of

claimed wherein the step of uniquely configuring the set of communication connection

parameters uniquely associated with each of the worker processes including the steps

of configuring the sets of communication connection parameters (column 14, Table I) to

provide a reserved bandwidth for retransmission (recited "transmission capacity

provided by the number of slots per time frame which the terminal has permanently

reserved" as to provide a reserved bandwidth for retransmission ; column 11, lines 41 –

45).

Conclusion

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-

3131. The examiner can normally be reached on Monday through Friday from 8:30am -

5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACL   Nov 21, 2006

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